

# Permit to Modify



**R13- 2826B**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

*Issued to:*

**Caiman Eastern Midstream, LLC**  
**Fort Beeler Station**  
**051-00127**

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*John A. Benedict*  
*Director*

*Issued: Draft • Effective: Draft*

This permit supersedes and replaces R13-2826 and R13-2841T.

Facility Location: Moundsville, Marshall County, West Virginia  
Mailing Address: 5949 Sherry Lane, Suite 645, Dallas, TX 75225  
Facility Description: Natural gas processing facility  
SIC Codes: 1321  
UTM Coordinates: 537.23 km Easting • 4408.34 km Northing • Zone 17  
Permit Type: Modification  
Description of Change: Removal of one (1) compressor engine and temporary equipment, and installation of new condensate tanks, a methanol tank, five (5) new compressor engines, a hot oil heater, a cryogenic unit, a regenerator heater, and truck loading.

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.*

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*The facility is subject to 45CSR30. The permittee has the duty to update the facility's Title V (45CSR30) permit application to reflect the changes permitted herein.*

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*Unless otherwise stated WVDEP DAQ did not determine whether the permittee is subject to an area source air toxics standard requiring Generally Achievable Control Technology (GACT) promulgated after January 1, 2007 pursuant to 40 CFR 63, including the area source air toxics provisions of 40 CFR 63, Subpart HH and 40 CFR 63, Subpart ZZZZ.*

## Table of Contents

<b>1.0.</b>	<b>Emission Units.....</b>	<b>5</b>
<b>1.1.</b>	<b>Control Devices .....</b>	<b>6</b>
<b>2.0.</b>	<b>General Conditions .....</b>	<b>7</b>
2.1.	Definitions .....	7
2.2.	Acronyms .....	7
2.3.	Authority .....	8
2.4.	Term and Renewal .....	8
2.5.	Duty to Comply .....	8
2.6.	Duty to Provide Information .....	8
2.7.	Duty to Supplement and Correct Information .....	9
2.8.	Administrative Permit Update.....	9
2.9.	Permit Modification .....	9
2.10.	Major Permit Modification.....	9
2.11.	Inspection and Entry.....	9
2.12.	Emergency.....	9
2.13.	Need to Halt or Reduce Activity Not a Defense .....	10
2.14.	Suspension of Activities.....	10
2.15.	Property Rights.....	10
2.16.	Severability.....	11
2.17.	Transferability .....	11
2.18.	Notification Requirements .....	11
2.19.	Credible Evidence .....	11
<b>3.0.</b>	<b>Facility-Wide Requirements .....</b>	<b>12</b>
3.1.	Limitations and Standards.....	12
3.2.	Monitoring Requirements .....	12
3.3.	Testing Requirements.....	12
3.4.	Recordkeeping Requirements.....	13
3.5.	Reporting Requirements.....	14
<b>4.0.</b>	<b>Source-Specific Requirements .....</b>	<b>15</b>
4.1.	Limitations and Standards .....	15
<b>5.0.</b>	<b>Source-Specific Requirements (Engines, 2S, 3S, 4S, 12S, 13S, 18S, 19S, 20S) .....</b>	<b>16</b>
5.1.	Limitations and Standards .....	16
5.2.	Monitoring Requirements .....	19
5.3.	Testing Requirements.....	19
5.4.	Recordkeeping Requirements.....	19
5.5.	Reporting Requirements.....	19
<b>6.0.</b>	<b>Source-Specific Requirements (Hot Oil Heaters, 5S, 14S, Regenerator Heater 21S) .....</b>	<b>20</b>
6.1.	Limitations and Standards .....	20
6.2.	Monitoring Requirements .....	21
6.3.	Testing Requirements.....	21
6.4.	Recordkeeping Requirements.....	21
6.5.	Reporting Requirements.....	21

<b>7.0.</b>	<b>Source-Specific Requirements (Gas Processing Plant, J-T Skid, 9S).....</b>	<b>22</b>
7.1.	Limitations and Standards .....	22
7.2.	Recordkeeping Requirements.....	22
<b>8.0.</b>	<b>Source-Specific Requirements (Cryogenic Unit, 17S) .....</b>	<b>22</b>
8.1.	Limitations and Standards .....	22
8.2.	Recordkeeping Requirements.....	22
<b>9.0.</b>	<b>Source-Specific Requirements (Natural Gas Liquid Loading Racks, 6S, 15S) .....</b>	<b>23</b>
9.1.	Limitations and Standards .....	23
9.2.	Recordkeeping Requirements.....	23
<b>10.0.</b>	<b>Source-Specific Requirements (40CFR60 Subpart JJJJ Requirements, 12S, 13S, 18S, 19S, 20S) .....</b>	<b>24</b>
10.1.	Limitations and Standards .....	24
10.2.	Emission Standards for Owners and Operators .....	24
10.3.	Other Requirements for Owners and Operators.....	25
10.4.	Compliance Requirements for Owners and Operators .....	26
10.5.	Testing Requirements for Owners and Operators.....	28
10.6.	Notification, Reports and Records for Owners and Operators .....	30
	<b>CERTIFICATION OF DATA ACCURACY .....</b>	<b>32</b>

## 1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
2S	2E	Waukesha 2895 GSI Compressor Engine	2010	607 HP	2C
3S	3E	Caterpillar G342 TA Compressor Engine	2010	265 HP	3C
4S	4E	Caterpillar G342 NA Compressor Engine	2010	225 HP	4C
5S	5E	Hot Oil Heater	2010	1.22 MMBtu/hr	None
6S	6E	Truck Loading	2010	NA	None
7S	7E	Wastewater Tank	2010	200 bbl	None
8S	8E	Condensate Tanks	2010	2@30,000 gallons 12@60,000 gallons	None
9S	9E	J-T Skid	2010	42 MMscf/day	None
12S	12E	Caterpillar 3516 LE Compressor Engine	2010	1,340 HP	12C
13S	13E	Caterpillar 3516 LE Compressor Engine	2010	1,340 HP	13C
14S	14E	Hot Oil Heater	2010	8.4 MMBtu/hr	None
15S	15E	Truck Loading	2010	NA	None
16S	16E	Methanol Tank	2010	3,000 gal	None
17S	17E	Cryogenic Unit	2010	120 MMcf/day	None
18S	18E	Caterpillar 3612 LE Compressor Engine	2010	3,550 HP	18C
19S	19E	Caterpillar 3612 LE Compressor Engine	2010	3,550 HP	19C
20S	20E	Caterpillar 3612 LE Compressor Engine	2010	3,550 HP	20C
21S	21E	Regenerator Heater	2010	4.08 MMBtu/hr	None

## 1.1 Control Devices

Control Device ID	Control Device	Emission Unit	Pollutant	Control Efficiency
2C	Non Selective Catalytic Reduction (NSCR)	Waukesha 2895 GSI Compressor Engine	Nitrogen Oxides	98 %
			Carbon Dioxide	77 %
			Volatile Organic Compounds	75 %
			Formaldehyde	76 %
3C	Non Selective Catalytic Reduction (NSCR)	Caterpillar G342 TA Compressor Engine	Nitrogen Oxides	98 %
			Carbon Dioxide	80 %
			Volatile Organic Compounds	37 %
			Formaldehyde	76 %
4C	Non Selective Catalytic Reduction (NSCR)	Caterpillar G342 NA Compressor Engine	Nitrogen Oxides	99 %
			Carbon Dioxide	85 %
			Volatile Organic Compounds	72 %
			Formaldehyde	76 %
12C 13C	Selective Catalytic Reduction (SCR)	Caterpillar 3516 LE Compressor Engine	Carbon Dioxide	95 %
			Volatile Organic Compounds	50 %
			Formaldehyde	94 %
18C 19C 20C	Selective Catalytic Reduction (SCR)	Caterpillar 3612 LE Compressor Engine	Carbon Dioxide	94 %
			Volatile Organic Compounds	50 %
			Formaldehyde	94 %

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5 µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>Pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>Ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppm<sub>v</sub> or ppmv</b>	Parts per Million by Volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>Psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### **2.3. Authority**

This permit is issued in accordance with West Virginia air pollution control law W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation*;

### **2.4. Term and Renewal**

- 2.4.1. This permit supersedes and replaces previously issued Permit R13-2826 and R13-2841T. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

### **2.5. Duty to Comply**

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2826, R13-2841T, R13-2826B and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
[45CSR§§13-5.11 and -10.3.]
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### **2.6. Duty to Provide Information**

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.



## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10 Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by

improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

#### **2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

#### **2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

#### **2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

#### **2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1] *[State Enforceable Only]*
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary

exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

[WV Code § 22-5-4(a)(15)]

### **3.4. Recordkeeping Requirements**

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
**[45CSR§4. State Enforceable Only.]**

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57<sup>th</sup> Street  
Charleston, WV 25304-2345

**If to the US EPA:**

Associate Director  
Office of Enforcement and Permits Review  
(3AP12)  
U.S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

#### 3.5.4. Operating Fee

- 3.5.4.1. In accordance with 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.
- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

## 4.0. Source-Specific Requirements

### 4.1. Limitations and Standards

- 4.1.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:
- The date, place as defined in this permit, and time of sampling or measurements;
  - The date(s) analyses were performed;
  - The company or entity that performed the analyses;
  - The analytical techniques or methods used;
  - The results of the analyses; and
  - The operating conditions existing at the time of sampling or measurement.
- 4.1.2. **Minor Source of Hazardous Air Pollutants (HAP).** HAP emissions from the facility shall be less than 10 tons/year of any single HAP or 25 tons/year of any combination of HAPs. Compliance with this Section shall ensure that the facility is a minor HAP source.
- 4.1.3. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.1 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.  
[45CSR§13-5.11.]
- 4.1.4. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.1, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- The equipment involved.
  - Steps taken to minimize emissions during the event.
  - The duration of the event.
  - The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- The cause of the malfunction.
- Steps taken to correct the malfunction.
- Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

## 5.0 Source-Specific Requirements (Engines, 2S, 3S, 4S, 12S, 13S, 18S, 19S, 20S)

### 5.1. Limitations and Standards

- 5.1.1. The quantity of natural gas that shall be consumed in the 607 hp natural gas fired reciprocating engine, Waukesha 2895 GSI (2S) shall not exceed 4,200 cubic feet per hour or  $36.76 \times 10^6$  cubic feet per year.
- 5.1.2. Maximum emissions from the 607 hp natural gas fired reciprocating engine, Waukesha 2895 GSI (2S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
2S	Nitrogen Oxides	0.33	1.47
	Carbon Monoxide	2.68	11.72
	Volatile Organic Compounds	0.13	0.57
	Formaldehyde	0.01	0.03

- 5.1.3. The quantity of natural gas that shall be consumed in the 265 hp natural gas fired reciprocating engine, Caterpillar G342 TA (3S) shall not exceed 1,889 cubic feet per hour or  $16.55 \times 10^6$  cubic feet per year.
- 5.1.4. Maximum emissions from the 265 hp natural gas fired reciprocating engine, Caterpillar G342 TA (3S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
3S	Nitrogen Oxides	0.06	0.26
	Carbon Monoxide	1.17	5.12
	Volatile Organic Compounds	0.06	0.28
	Formaldehyde	0.01	0.05

- 5.1.5. The quantity of natural gas that shall be consumed in the 225 hp natural gas fired reciprocating engine, Caterpillar G342 NA (4S) shall not exceed 1,469 cubic feet per hour or  $12.87 \times 10^6$  cubic feet per year.
- 5.1.6. Maximum emissions from the 225 hp natural gas fired reciprocating engine, Caterpillar G342 NA (4S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
4S	Nitrogen Oxides	0.05	0.22
	Carbon Monoxide	0.99	4.35
	Volatile Organic Compounds	0.06	0.28
	Formaldehyde	0.01	0.05



5.1.7. The quantity of natural gas that shall be consumed in the 1,340 hp natural gas fired reciprocating engine, Caterpillar 3516 LE (12S) shall not exceed 11,026 cubic feet per hour or  $96.59 \times 10^6$  cubic feet per year.

5.1.8. Maximum emissions from the 1,340 hp natural gas fired reciprocating engine, Caterpillar 3516 LE (12S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
12S	Nitrogen Oxides	4.43	19.41
	Carbon Monoxide	0.56	2.45
	Volatile Organic Compounds	0.46	2.01
	Formaldehyde	0.08	0.33

5.1.9. The quantity of natural gas that shall be consumed in the 1,340 hp natural gas fired reciprocating engine, Caterpillar 3516 LE (13S) shall not exceed 11,026 cubic feet per hour or  $96.59 \times 10^6$  cubic feet per year.

5.1.10. Maximum emissions from the 1,340 hp natural gas fired reciprocating engine, Caterpillar 3516 LE (13S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
13S	Nitrogen Oxides	4.43	19.41
	Carbon Monoxide	0.56	2.45
	Volatile Organic Compounds	0.46	2.01
	Formaldehyde	0.08	0.33

5.1.11. The quantity of natural gas that shall be consumed in the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (18S) shall not exceed 26,022 cubic feet per hour or  $227.95 \times 10^6$  cubic feet per year.

5.1.12. Maximum emissions from the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (18S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
18S	Nitrogen Oxides	3.91	17.14
	Carbon Monoxide	2.15	9.43
	Volatile Organic Compounds	2.47	10.80
	Formaldehyde	0.32	1.37

- 5.1.13. The quantity of natural gas that shall be consumed in the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (19S) shall not exceed 26,022 cubic feet per hour or  $227.95 \times 10^6$  cubic feet per year.
- 5.1.14. Maximum emissions from the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (19S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
19S	Nitrogen Oxides	3.91	17.14
	Carbon Monoxide	2.15	9.43
	Volatile Organic Compounds	2.47	10.80
	Formaldehyde	0.32	1.37

- 5.1.15. The quantity of natural gas that shall be consumed in the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (20S) shall not exceed 26,022 cubic feet per hour or  $227.95 \times 10^6$  cubic feet per year.
- 5.1.16. Maximum emissions from the 3,550 hp natural gas fired reciprocating engine, Caterpillar 3612 LE (20S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
20S	Nitrogen Oxides	3.91	17.14
	Carbon Monoxide	2.15	9.43
	Volatile Organic Compounds	2.47	10.80
	Formaldehyde	0.32	1.37

5.1.17. Requirements for Use of Catalytic Reduction Devices

- Natural gas compressor engines equipped with non-selective catalytic reduction (NSCR) air pollution control devices shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to deliver additional fuel when required to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 0.5%. The automatic air/fuel ratio controller shall also incorporate dual-point exhaust gas temperature and oxygen sensors which provide temperature and exhaust oxygen content differential feedback. Such controls shall ensure proper and efficient operation of the engine and NSCR air pollution control device;
- Natural gas compressor engines equipped with selective catalytic reduction (SCR) air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/SCR combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine, ammonia injection and SCR device, monitor emission levels downstream of the catalyst element and limit ammonia slip to less than 10 ppm<sub>v</sub>;
- The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

- d. No person shall knowingly:
  - 1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
  - 2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
  - 3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

## **5.2. Monitoring Requirements**

### **5.2.1. Catalytic Oxidizer Control Devices**

- a. The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The registrant shall ensure proper operation, maintenance and performance of catalytic reduction devices and auxiliary air pollution control devices by:
  - 1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller.
  - 2. Following operating and maintenance recommendations of the catalyst element manufacturer.

## **5.3. Testing Requirements**

- 5.3.1. See Facility-Wide Testing Requirements Section 3.3.

## **5.4. Recordkeeping Requirements**

- 5.4.1. To demonstrate compliance with sections 5.1-5.16, the permittee shall maintain records of the amount and type of fuel consumed in each engine and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## **5.5. Reporting Requirements**

- 5.5.1. See Facility-Wide Reporting Requirements Section 3.5.

## 6.0. Source-Specific Requirements (Hot Oil Heaters, 5S, 14S, Regenerator Heater 21S)

### 6.1. Limitations and Standards

6.1.1. Maximum Design Heat Input. The maximum design heat input for the Hot Oil Heater (5S) shall not exceed 1.22 mmBtu/hr.

6.1.2. Maximum emissions from the 1.22 MMBtu/hr Hot Oil Heater (5S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
5S	Nitrogen Oxides	0.10	0.45
	Carbon Monoxide	0.09	0.37

6.1.3. The quantity of natural gas that shall be consumed in the 1.22 MMBtu/hr Hot Oil Heater (5S) shall not exceed 24,442 cubic feet per day or  $8.92 \times 10^6$  cubic feet per year.

6.1.4. Maximum Design Heat Input. The maximum design heat input for the Hot Oil Heater (14S) shall not exceed 8.4 mmBtu/hr.

6.1.5. Maximum emissions from the 8.4 MMBtu/hr Hot Oil Heater (14S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
14S	Nitrogen Oxides	0.77	3.38
	Carbon Monoxide	0.65	2.84

6.1.6. The quantity of natural gas that shall be consumed in the 8.4 MMBtu/hr Hot Oil Heater (14S) shall not exceed 185,204 cubic feet per day or  $67.60 \times 10^6$  cubic feet per year.

6.1.7. Maximum Design Heat Input. The maximum design heat input for the Regenerator Heater (21S) shall not exceed 4.08 mmBtu/hr.

6.1.8. Maximum emissions from the 4.08 MMBtu/hr Regenerator Heater (21S) shall not exceed the following limits:

Emission Unit ID	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (ton/year)
21S	Nitrogen Oxides	0.38	1.65
	Carbon Monoxide	0.32	1.38

6.1.9. The quantity of natural gas that shall be consumed in the 4.08 MMBtu/hr Regenerator Heater (21S) shall not exceed 89,913 cubic feet per day or  $32.82 \times 10^6$  cubic feet per year.

## **6.2. Monitoring Requirements**

- 6.2.1. See Facility-Wide Monitoring Requirements Section 3.2.

## **6.3. Testing Requirements**

- 6.3.1. See Facility-Wide Testing Requirements Section 3.3.

## **6.4. Recordkeeping Requirements**

- 6.4.1. To demonstrate compliance with sections 6.1-6.3, the permittee shall maintain records of the amount and type of fuel consumed in the 1.22 MMBtu/hr Hot Oil Heater (5S). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 6.4.2. To demonstrate compliance with sections 6.4-6.6, the permittee shall maintain records of the amount and type of fuel consumed in the 8.4 MMBtu/hr Hot Oil Heater (14S). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
- 6.4.3. To demonstrate compliance with sections 6.7-6.9, the permittee shall maintain records of the amount and type of fuel consumed in the 4.08 MMBtu/hr Regenerator Heater (21S). Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## **6.5. Reporting Requirements**

- 6.5.1. See Facility-Wide Reporting Requirements Section 3.5.

## **7.0. Source-Specific Requirements (Gas Processing Plant, J-T Skid, 9S)**

### **7.1. Limitations and Standards**

- 7.1.1. Maximum Throughput Limitation. The maximum wet natural gas throughput to the Gas Processing Plant shall not exceed 42 mmscf/day. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 7.1.2. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart KKK, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.635 and §60.636. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.636 and submitted to the following addresses listed in Section 3.5.3.

### **7.2. Recordkeeping Requirements**

To demonstrate compliance with section 7.1.1 the permittee shall maintain records of the amount of natural gas processed in the Gas Processing Plant. Said records required shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## **8.0. Source-Specific Requirements (Cryogenic Unit, 17S)**

### **8.1. Limitations and Standards**

- 8.1.1. Maximum Throughput Limitation. The maximum wet natural gas throughput to the Cryogenic Unit shall not exceed 120 mmscf/day. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 8.1.2. The permitted facility shall comply with all applicable provisions of 40CFR60 Subpart KKK, provided that compliance with any more stringent limitation set forth under this permit shall also be demonstrated. Recordkeeping and reporting requirements shall be conducted in accordance with §60.635 and §60.636. These reports shall be submitted in accordance with the time lines and in the order set forth in §60.636 and submitted to the following addresses listed in Section 3.5.3.

### **8.2. Recordkeeping Requirements**

To demonstrate compliance with section 8.1.1 the permittee shall maintain records of the amount of natural gas processed in the Cryogenic Unit. Said records required shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## **9.0. Source-Specific Requirements (Natural Gas Liquid Loading Racks, 6S, 15S)**

### **9.1. Limitations and Standards**

- 9.1.1. Maximum Throughput Limitation. The maximum natural gas liquids throughput to the Natural Gas Liquid Loading Rack (Truck Pump #1, 6S) shall not exceed 143,000 gal/day and 52,100,000 gal/yr. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 9.1.2. Maximum Throughput Limitation. The maximum natural gas liquids throughput to the Natural Gas Liquid Loading Rack (Truck Pump #2, 15S) shall not exceed 571,000 gal/day and 208,500,000 gal/yr. Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
- 9.1.3. The Natural Gas Liquid Loading Racks (6S, 15S) shall be operated in accordance with the plans and specifications filed in Permit Applications R13-2826 and R13-2826B.

### **9.2. Recordkeeping Requirements**

- 9.2.1. To demonstrate compliance with sections 9.1.1 and 9.1.2 the permittee shall maintain records of the amount of natural gas liquids processed in the Natural Gas Liquid Loading Racks (6S, 15S). Said records required shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

## **10.0. Source-Specific Requirements (40CFR60 Subpart JJJJ Requirements, 12S, 13S, 18S, 19S, 20S)**

### **10.1. Limitations and Standards**

- 10.1.1. The provisions of this subpart are applicable to owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified below. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.
  - a. Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:
    1. On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);
    2. on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;
    3. on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
    4. on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).
  - b. Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006. [40CFR§60.4230(a)]
- 10.1.2. The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand. [40CFR§60.4230(b)]
- 10.1.3. If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable. [40CFR§60.4230(c)]
- 10.1.4. For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines. [40CFR§60.4230(d)]
- 10.1.5. Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security. [40CFR§60.4230(e)]

### **10.2. Emission Standards for Owners and Operators**

- 10.2.1. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE. [40CFR§60.4233(c)]
- 10.2.2. Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except



gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified. [40CFR§60.4233(e)]

- 10.2.3. Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of after treatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of after treatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel. [40CFR§60.4233(g)]
- 10.2.4. Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section. [40CFR§60.4233(h)]
- 10.2.5. Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine. [40CFR§60.4234]

### **10.3. Other Requirements for Owners and Operators**

- 10.3.1. After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233. [40CFR§60.4236(a)]
- 10.3.2. After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010. [40CFR§60.4236(b)]
- 10.3.3. For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. [40CFR§60.4236(c)]
- 10.3.4. The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location. [40CFR§60.4236(e)]
- 10.3.5. Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter. [40CFR§60.4237(b)]

#### **10.4. Compliance Requirements for Owners and Operators**

- 10.4.1. If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.
- a. If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.
  - b. If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.
    1. If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.
    2. If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.
    3. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.
- [40CFR§60.4243(a)]
- 10.4.2. If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.
- a. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.
  - b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.
    1. If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the

engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

2. If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[40CFR§60.4243(b)]

- 10.4.3. If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f). [40CFR§60.4243(c)]

- 10.4.4. Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited. [40CFR§60.4243(d)]

- 10.4.5. Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233. [40CFR§60.4243(e)]

- 10.4.6. If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a). [40CFR§60.4243(f)]

- 10.4.7. It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40CFR§60.4243(g)]

10.4.8. If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

- a. Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.
- b. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.
- c. Keeping records of engine manufacturer data indicating compliance with the standards.
- d. Keeping records of control device vendor data indicating compliance with the standards.

[40CFR§60.4243(h)]

## 10.5. Testing Requirements for Owners and Operators

10.5.1. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart. [40CFR§60.4244(a)]
- b. You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine. [40CFR§60.4244(b)]
- c. You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. [40CFR§60.4244(c)]
- d. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

[40CFR§60.4244(d)]

- d. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C<sub>d</sub> = Measured CO concentration in ppmv.

1.164×10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(e)]

- e. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C<sub>d</sub> = VOC concentration measured as propane in ppmv.

1.833×10<sup>-3</sup> = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[40CFR§60.4244(f)]

- f. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

$RF_i$  = Response factor of compound i when measured with EPA Method 25A.

$C_{mi}$  = Measured concentration of compound i in ppmv as carbon.

$C_{Ai}$  = True concentration of compound i in ppmv as carbon.

$$C_{icorr} = RF_i \times C_{imeas} \quad (\text{Eq. 5})$$

Where:

$C_{icorr}$  = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{imeas}$  = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \quad (\text{Eq. 6})$$

Where:

$C_{Peq}$  = Concentration of compound i in mg of propane equivalent per DSCM.

[40CFR§60.4244(g)]

## 10.6. Notification, Reports, and Records for Owners and Operators

10.6.1. Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

a. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

1. All notifications submitted to comply with this subpart and all documentation supporting any notification.
2. Maintenance conducted on the engine.
3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90 and 1048.
4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

[40CFR§60.4245(a)]

b. For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-

emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40CFR§60.4245(b)]

- c. Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.
  - 1. Name and address of the owner or operator;
  - 2. The address of the affected source;
  - 3. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
  - 4. Emission control equipment; and
  - 5. Fuel used.[40CFR§60.4245(c)]
- d. Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. [40CFR§60.4245(d)]

## CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup>

(please use blue ink)

\_\_\_\_\_  
Responsible Official or Authorized Representative

\_\_\_\_\_  
Date

Name & Title

(please print or type)

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

Telephone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

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<sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
  - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
  - (ii) the delegation of authority to such representative is approved in advance by the Director;
- b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
- c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
- d. The designated representative delegated with such authority and approved in advance by the Director.